

ADVANCED VOICE ASSISTANT BASED ON ARTIFICIAL INTELLIGENCE

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ABSTRACT

Python is an emerging language since so it becomes easy to write a script for Voice Assistant in Python. Python is a widely used, object oriented and high-level programming language. The instructions for the assistant can be handled as per the requirement of user. Speech recognition is the process of converting speech into text. This is commonly used in voice assistants like Alexa, Siri, Ok Google, Cortana. In Python there is an API called Speech Recognition which allows us to convert speech into text. In this present situation, advancement in technologies is such that they can perform any job with same effectiveness as human or can say more effectively than human. Finding solution in few seconds.

Keywords: Virtual Assistant, Speech Recognition, Low Cost, Internet, Speech Synthesis, Visually Challenged.

I. INTRODUCTION

Artificial Intelligence when used with machine, it shows us the capability of thinking like humans. As the voice assistant is using engineering science hence the result that's providing are highly accurate and efficient. The assistant can help to cut back human efforts and consumes time while performing any task, they removed the concept of typing completely and behave as another individual to whom we are talking and asking to perform task. The assistant isn't any but an individual's assistant, but we'll say that this will be more practical and efficient to perform any task. The libraries and packages used to make this assistant focuses on the time complexities and reduces time.

The task it can do such as send email, read PDF, it can send text on WhatsApp, it can open cmd, it can open websites like Google, YouTube, etc., in browser, it can give weather outlook. We've smartphone and it's nothing but having world at your fingertips. Now days we just speak of task and it's done by using voice assistance. This system is designed to be used on desktop. Virtual voice assistance is turning out to be smarter then ever. Allow intelligent voice assistant to make email work for you. Detect intent, pick out important and useful information, automate processes as well as deliver personalizer response.

II. METHODOLOGY

The system is designed using the concept of Artificial Intelligence and with the help of necessary packages of Python. Python provides many libraries and packages to perform the tasks, for example pyPDF2 can be used to read PDF. The data in this project is nothing but user input, whatever the user says, the assistant performs the task accordingly. The user input is nothing specific but the list of tasks which a user wants to get performed in human language i.e., English. we divide methodology in two parts: knowledge abstraction and response generation.

1. Knowledge abstraction:

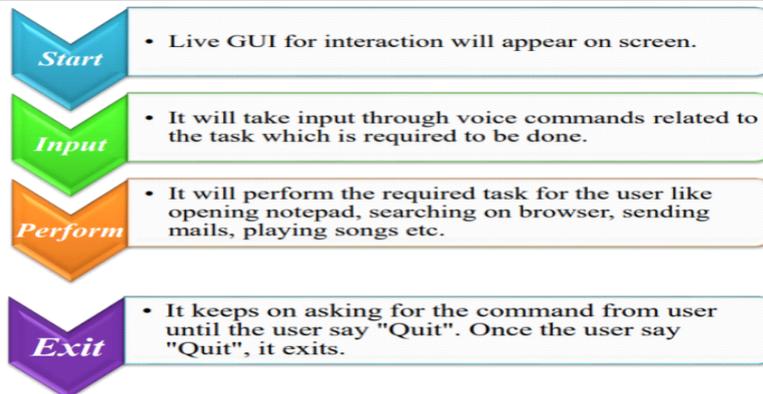
Knowledge abstraction contain data gathering.

1.1 Data Gathering:

Data gathering involves finding key concept of the course and gathering information about them. This category's structure content of the chatbot. Here, gathering information from past data, experience and available sources.

1.2 Response generation:

There is a through description of how entities and intents work within dialog flow, but it is precise to elaborate about how the way things are already implemented in this platform can benefit the proposed methodology.



III. MODELING AND ANALYSIS

Speech Recognition module:

It is a python module which converts speech to text. The similar text is then received and fed to the central processor. The speech input Users can obtain texts from the special corpora organized on the pc server at the data center from the microphone is temporarily stored within the system which is then sent to Google cloud for speech recognition.

Python Backend:

A python backend is simply server-side software written in Python. The python backend gets the output from the speech recognition module and then identifies whether the speech output is an API Call and Context Extraction. The output is then sent back to the python backend to give the required output to the user.

API calls:

API stands for Application Programming Interface. An API is a software medium that allows two applications to talk to each other. An API may be a messenger that delivers your request to the provider that you're requesting it from and so delivers the response back to you.

Content Extraction:

Context extraction (CE) is that the task of automatically extracting structured information from unstructured and/or semi-structured machine-readable documents. In most 14 cases, this activity concerns processing human language texts using language processing (NLP). 9 Recent activities in multimedia document processing like automatic, annotation and content extraction out of images/audio/video might be seen as context extraction TEST RESULTS.

Text-to-speech module:

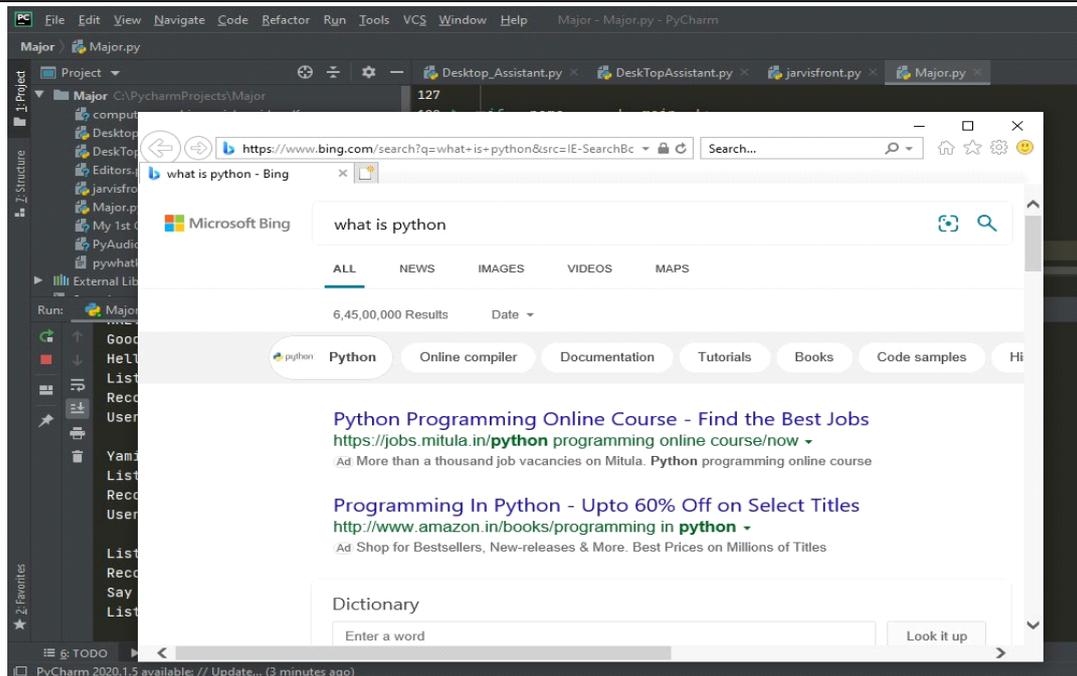
Text-to-Speech refers to the power of computers to read text aloud. Text-to-Speech Engine converts written communication to a phonemic representation, then converts the phonemic representation to waveforms which will be output as sound. Text-to-Speech engines with different languages, dialects and specialized vocabularies are available through third-party publishers.

IV. RESULTS AND DISCUSSION

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Run: Major x
C:\Python36\python.exe C:/PycharmProjects/Major/Major.py
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Speech\Voices\Tokens\TTS_MS_EN-US_DAVI11.0
Good Morning!
Hello!, I am Zira. Please tell me how may I help you
Listening...
Recognizing...
User said: open Google

Yamini, what should I search on google?
Listening...
Recognizing...
User said: what is python
  
```



V. CONCLUSION

It eases most of the tasks of the user like searching the net, retrieving weather outlook details, vocabulary help and medical related queries. We aim to form this project a whole server assistant and make it smart enough to act as a replacement for a general server administration. The long-term plans include integrating Jack with mobile using React Native to produce a synchronized experience between the 2 connected devices. Further, within the long term, Jack is planned to feature auto deployment supporting elastic beanstalk, backup files, and every one operation which a general Server Administrator does. The functionality would be seamless enough to switch the Server Administrator with Jarvis.

ACKNOWLEDGEMENTS

In completing this project report on project titled Advance Voice Assistant supported AI we had taken the assistant and guideline of some respected people, who deserve our greatest gratitude. This assistant is cable of working fast and more accurate while interacting with human. This method may be applied in multilingual application in order that person can use the applying in their own language.

VI. REFERENCES

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